

**LOUDOUN COUNTY  
PUBLIC SAFETY FIRING RANGE**

**SPECIAL EXCEPTION  
SPEX 2014-0018  
COMMISSION PERMIT  
CMPT 2014-0003**

**STATEMENT OF JUSTIFICATION  
SEPTEMBER 3, 2014  
REVISED JUNE 2, 2015**

**PROPOSAL**

Pursuant to Sections 2-100 and 6-1309 of the Revised 1993 Zoning Ordinance, Loudoun County Department of Transportation and Capital Infrastructure, the Applicant, is requesting approval of a Special Exception for the construction of an indoor Public Safety Firing Range within the AR-1 zoning district. Please see conceptual site plan and architectural rendering for reference (Attachments #1 and #2). Additionally, the County seeks approval to allow for a government owned indoor public safety firing range via a concurrent Commission Permit (CMPT 2014-0003).

The Public Safety Firing Range shall be constructed for the Loudoun County Sheriff's Office and will be a government owned facility of approximately 65,600 square feet over three structures including a water treatment facility. The three structures are to be located on a 19.25-acre parcel just west of the Dulles Greenway and immediately north of and fronting on Shreve Mill Road, south of the Town of Leesburg. The property, more specifically identified as MCPI 235-17-7001 is zoned Agricultural Rural – 1 (AR-1), currently is forested and undeveloped, and lies within 1-mile buffer of LDN 60 of the Leesburg Executive Airport with the AI, Airport Impact Overlay District. The property, which is subject to the conditions noted in ZMAP 2005-0042, is considered within the Rural Policy Area of Loudoun County Comprehensive Plan.

The proposed indoor training facility will be constructed to support the Sheriff's Office and is scheduled to replace an outdoor firing range currently leased by the Sheriff's Office. The proposed indoor Public Safety Firing Range is for law enforcement use only and will not be open to the public. The Sheriff's Office is considering offering opportunities for training and education to other local law enforcement entities. The range is scheduled to be co-located on the property with the future Leesburg South Fire and Rescue Station. The future Fire and Rescue station is not under consideration with this application.

To support the Sheriff's Office training program, the main building of the indoor Public Safety Firing Range will include two firing ranges, locker rooms, class rooms, mechanical equipment, storage, office space, and ancillary facilities in support of the above. A second building is proposed to provide a force-on-force facility to allow for the Sheriff's Office personnel to train tactical maneuvering and situational simulation. The proposed facility will meet all of the requirements of the Loudoun County Revised 1993 Zoning Ordinance, as well as the requirements of the Codified Ordinance for this type of facility.

## **BACKGROUND**

The applicant believes that this Special Exception is warranted. The Sheriff's Office has been leasing an outdoor firing range off of Rt. 50 to host their training facility for new and existing law enforcement officers. The existing facility has become outdated and provides limited capacity to support the growing organization. Due to the nature of its outdoor programming, the existing facility is subject to weather conditions that inhibit and detract from the regular training required by the office.

The Public Safety Firing Range project was originally planned as a joint outdoor range facility with the Metropolitan Washington Airports Authority (MWAA) and the Northern Virginia Criminal Justice Academy and funded for that scope in FY 2008 and FY 2009 in Loudoun County's Capital Improvement Program.

On July 19, 2011, the Loudoun County Board of Supervisors directed (9-0) County staff to proceed with a County-owned facility ending negotiations for the joint facility. The Sheriff's Office spent considerable effort attempting to locate a suitable site in the County to construct a new outdoor range in 2012. Despite those efforts, an appropriate site for this function was not identified and the Sheriff's Office migrated to an indoor range program. On February 6, 2013 the Board designated a proffered site on Shreve Mill Road, west of the Greenway, to locate the County-owned facility (8-0-1). This is the project site proposed with this application and is planned for co-location of the future Leesburg South Fire and Rescue Station. The future Fire and Rescue station is not under consideration with this application.

The Loudoun County Department of Transportation and Capital Infrastructure with the Loudoun County Sheriff's Office and the Clark Nexsen design team hosted a Community Presentation of the proposed project on April 15, 2014.

## **JUSTIFICATION**

In general, firearms training for law enforcement agencies in the Commonwealth of Virginia are governed by both State Code and case law. More specifically, the Virginia Department of Criminal Justice Services (DCJS) requires that sworn personnel shoot a set series of qualifications courses with their issued weapons once a year. Those courses must be tested with a passing score of 70%. Any score below that necessitates that officer being placed on temporary restricted duty until they can receive remedial training and test again. While DCJS sets the standard for qualifying at once per year, the Loudoun County Sheriff's Office, by administrative policy, requires that sworn personnel qualify at least twice a year.

Several significant Court rulings also set standards for the quality of training received by officers. In *Popow v. City of Margate*, 476 F.Supp. 1237 (Dist. N.J. 1979), the Court established that agencies must train in circumstances that they are likely to face in their working environment. That requires a facility large enough to accommodate vehicles, shooting on the move and in different lighting conditions and shooting from unusual positions including from behind cover. Further in *Zuchel v. Denver*, 997 F.2d 730 (10th Cir. 1993), the 10<sup>th</sup> Circuit ruled that training must include testing judgment on when and to what degree force is used. That

sort of training is typically completed using a combination of use of force simulators and force on force exercises. Both of these spaces are programmed into the facility.

In an effort to maintain the standards established above while managing overtime expenses, the Sheriff's Office would schedule two separate shifts for training at the facility. The first would be from 7:00 AM to 4:00 PM and the second from 6:00 PM to 3:00 AM. Those times mirror the days/nights schedule that the majority of sworn personnel work. The remaining six hours would be used to rejuvenate each of the training venues. While the majority of training would be scheduled for Monday through Friday, the facility would still be available for training during the same hours on Saturday and Sunday.

The 19.25-acres parcel, located adjacent to the Dulles Greenway, is zoned AR-1 and is at the eastern most edge of the Rural Policy Area. The pie-shaped parcel is bounded by the Dulles Greenway on its northern side, with existing farms and open space bordering the property on its western and southern edges. The parcel has been previously identified by the County to be the home of the future Leesburg South Fire and Rescue Station consistent with Rural Policy Area to co-locate government facilities.

The proposed design for the proposed facility takes into account its rural setting with a large setback from the existing and future roadway creating a low visual profile from the traveling public. Utilizing the natural grade and surroundings, the proposed facility will incorporate low-impact design elements while preserving the existing woodlands to the maximum extent possible. The existing trees mixed with supplemental plantings will provide perimeter buffers to the adjoining neighbors meeting all required landscape buffers per the Zoning Ordinance.

### **SPECIAL EXCEPTION**

In accordance with Section 6-1309 of the Revised 1993 Zoning Ordinance, the applicant offers the following responses to the issues for consideration:

#### **(1) Whether the proposed minor special exception or special exception is consistent with the Comprehensive Plan.**

The project's location lies within the Rural Policy Area near its eastern most boundary adjacent to the Dulles Greenway. Governmental facilities are an allowed function within the policy area. Consistent with the policy, the County is proposing to co-locate the indoor firing range with a future fire and rescue station serving the Leesburg South area. The site is appropriate due to its close proximity to the Sheriff's Office Headquarters located within 3 miles of the project location and its immediate access to the Dulles Greenway interchange with Shreve Mill Road.

Incorporating Green Infrastructure policies of the Rural Policy Area, the design and layout of the project will preserve a wooded buffer along its northern, western, and far eastern boundaries while protecting the existing wetlands identified on the parcel. The setting and design of the one-story facility shall be made with its rural setting in mind with large setbacks and grading to reduce the visual profile of the new facility from the existing Shreve

Mill roadway. Care shall be taken with construction and design to limit the impact to the wooded area and incorporate low-impact development design elements.

**(2) Whether the level and impact of any noise, light, glare, odor or other emissions generated by the proposed use will negatively impact surrounding uses.**

The design of the indoor facility will minimize any sounds emanating from the firing range to below the levels allowed within the Revised 1993 Zoning Ordinance. A sound study was conducted to demonstrate compliance with the County's Zoning Ordinance for sound levels. In order to ensure the maximum allowed level of 55 dBA is met at the property limits during normal operations, the building is proposed to be shifted away from the western property boundary and the architectural design will include exterior doors with increased STC ratings and duct silencers within the building's HVAC system. Attachment #3 is provided for a graphic demonstration of anticipated sound levels determined from the sound study.

Outdoor lighting will be minimized to the extent allowable while ensuring a safe environment for users and visitors to the site, as well as for site security. All exterior lighting will be designed to meet or exceed the allowed lighting levels per Section 5-1504 of the Revised 1993 Zoning Ordinance. No odors or other emissions will be generated by this use.

**(3) Whether the proposed use is compatible with other existing or proposed uses in the neighborhood, and on adjacent parcels.**

The parcel is bordered by existing farms and rural homesteads on its western and southern borders and the Dulles Greenway to the north and east. A future PD-IP development is proposed on the eastern side of the Dulles Greenway. The one-story building proposed is consistent with other rural commercial and non-residential or farming facilities elsewhere in the Rural Policy Area. The Leesburg Executive Airport and other government facilities are located less three miles to the northeast of the site.

**(4) Whether the proposed special exception or minor special exception adequately protects and mitigates impacts on the environmental or natural features including, but not limited to, wildlife habitat, vegetation, wetlands, water quality (including groundwater), air quality, topographic, scenic, archaeological or historic features, and agricultural and forestal lands.**

An archeological study was done on the property for the zoning map amendment application ZMAP 2008-0009 as it was then part of the overall of property until later subdivided. The archeological study did not identify any cultural resources of significance nor did it recommend further investigations on the property.

A wetlands study provided for the same application identified existing wetlands on the property's eastern and northern edges. This project does not propose any disturbance of these wetlands. All Federal and State requirements will be met in terms of wetlands identification and permitting. Care will be taken with the design to preserve the existing woodland area to maximum extent possible and incorporate same into required landscaped buffers where possible and appropriate.

In 2012, a Wetland, Studies, and Solutions, Inc. request to DCR Division of Natural Heritage identified no documented State Natural Preserves (including endangered plant, animal and insect species) under the DCR's jurisdiction within the vicinity of the project.

The project will meet all of the requirements of the State and County regulations relating to stormwater management and Best Management Practices to insure water quality in runoff is addressed. Due to its close proximity to the Dulles Greenway and other major roadways this location should help reduce overall emissions related to vehicle trips verses the current location of the facility. The use itself will not generate any emissions which would affect air quality. A detailed Tree Stand Evaluation was conducted by christopher consultants, ltd. (ccl) on the site and is included within the submission package. Where feasible and appropriate the applicant will incorporate existing vegetation into the site landscaping.

**(5) Whether the proposed special exception at the specified location will contribute to or promote the welfare or convenience of the public.**

By relocating the public safety firing range from its existing location off of Rt. 50 to nearby the Sheriff's Office Headquarters site, the Sheriff's office will recognize increased efficiencies in their activities that will lead to an improved functioning department. The location of the training facility is also centrally located within the County allowing for shorter travel time from western locations while not impacting travel times from the Sheriff's eastern substation. Further, the subsequent closure of the outdoor facility located at 25020 Willard Road will eliminate noise complaints from surrounding residential developments. The closure will also eliminate complaints from Airports Authority Operations reference bullets traveling over the bullet traps onto Airport property.

**(6) Whether the proposed special exception can be served adequately by public utilities and services, roads, pedestrian connections and other transportation services and, in rural areas, by adequate on-site utilities.**

There are no public water and sewer utilities in the vicinity of the project that can be extended therefore the project will be served by a private well and septic system to be installed on-site with the construction. The well and septic system will be designed in accordance with the State and County Health department requirements.

A traffic impact study produced by Clark Nexsen identified only minor roadway improvements to the existing Shreve Mill Road are necessary to accommodate any traffic impacts generated from the new facility. The study recommends a tapered turn-lane for westbound traffic on Shreve Mill Road entering the site. No other transportation improvements were identified as necessary due to the construction of the new facility.

Shreve Mill Road is currently a two-lane pave-in-place roadway from the Dulles Greenway to Evergreen Road west of the project site. The Board of Supervisors recently identified and voted for the road's adoption into the VDOT's Rural Rustic Road program and therefore is not intended to be widened or improved except in a manner that maintains its rural characteristics. The applicant is proposing to widen the existing pavement section of Shreve Mill Road only along the property's frontage from approximately 18 feet to 24 feet of

pavement with the project to allow for safe conveyance of two-way traffic along the property's frontage.

## **COMMISSION PERMIT**

### **CONFORMANCE WITH THE REVISED GENERAL PLAN**

The proposed site is governed by the *Revised General Plan* (Plan), the Countywide Transportation Plan (CTP), and the Bicycle and Pedestrian Mobility Master Plan. The subject property lies within the Rural Policy Area of the Plan. The design strategy set forth in the policy area of the Plan calls for retaining the rural essence of the County and preservation of its Green Infrastructure. The Plan also supports a variety of rural commercial, industrial, and institutional activities that preserve the rural character and are compatible with the dominant rural land use.

The proposed design for the new facility takes into account its rural setting with large setbacks from the existing and future roadways. To the extent possible, the design and layout of the project will preserve a wooded buffer along its northern, western, and far eastern boundaries while also protecting the existing wetlands identified on the parcel. Additional landscaping, using appropriately selected materials will supplement the existing mature vegetation to provide buffering along the property's frontage with Shreve Mill Road. Care will be taken with construction and design to limit the impact to the wooded area and incorporate low-impact development design elements like grass swales and bioretention facilities that will meet or exceed the County's stormwater management and BMP design requirements.

The future training facility will incorporate a one story design for the main facility, not to exceed 35 feet in height, to maintain a low visual impact to Shreve Mill Road. Utilizing the topography of the site, the proposed facility will be sited in a manner that buffers the new buildings from the public view. Furthermore, the building design will incorporate features and colors that will blend the new facility into its natural settings. The site is well located to serve the Sheriff's office and blend into its natural surroundings while providing easy access to and from the greater Loudoun County for the law enforcement personnel utilizing the facility.

Chapter 5 of the Plan identifies four components of the Green Infrastructure to be considered as a part of Conservation Design:

### **Group One/ Natural Resources**

The proposed project site is an existing wooded site with two previously identified wetland areas located in the northern and eastern corners of the property. Wetland Studies and Solutions, Inc. (WSSI) evaluated these areas as part of a previous application for the planned industrial development located on the east side of the Dulles Greenway when the project site was part of that development (ZMAP 2008-009). The proposed project will preserve these environmentally sensitive areas. A Tree Stand Evaluation has been prepared by christopher consultants, ltd, and is included with this application submission for review.

Due to the extent of the existing woodlands on-site, selective removal of some wooded areas will be necessary to construct the proposed facility. The proposed project intends to preserve and utilize the existing mature vegetation along the property's northern, eastern, and western boundaries to the maximum extent practical.

In 2012, a WSSI request to DCR Division of Natural Heritage identified no documented State Natural Preserves (including endangered plant, animal and insect species) under the DCR's jurisdiction within the vicinity of the project.

The property is not located adjacent to any scenic rivers or floodplains. A subsurface investigation of the site did not identify any limestone conglomerates within the area. As there are no public water and sewer utilities available within the area for extension, the site will be supported by its own private well and septic system designed to accommodate the project. Due to the low demand usage anticipated for the facility, no adverse impacts are anticipated.

#### **Group Two/ Heritage Resource Assets**

In 2005, Thunderbird Archeology, a division of WSSI, conducted a Phase I archeological survey that included the project site. A total of 68 shovel test pits were conducted on the project site as part of the overall study. No artifacts were recovered from the shovel tests and no additional archeological work was recommended.

#### **Group Three/ Open Space Assets**

Due to the nature of the proposed use and the characteristics associated with the governmental facility, no dedicated open spaces are anticipated, although the design and development of this project intends to preserve as much of the existing natural surroundings as practical by minimizing disturbance.

#### **Group Four/ Complementary Elements**

The design of the indoor facility will minimize any sounds emanating from the firing range to below the levels allowed within the Revised 1993 Zoning Ordinance. A sound study was conducted to demonstrate compliance with the County's Zoning Ordinance for sound levels. In order to ensure the maximum allowed level of 55 dBA is met at the property limits during normal operations, the building is proposed to be shifted away from the western property boundary and the architectural design will include exterior doors with increased STC ratings and duct silencers within the building's HVAC system. Attachment #3 is provided for a graphic demonstration of anticipated sound levels determined from the sound study.

Outdoor lighting will be minimized to the extent allowable while ensuring a safe environment for any visitors. All exterior lighting will be designed not to exceed the allowed lighting levels per Section 5-1504 of the Revised 1993 Zoning Ordinance. No adverse impacts are anticipated.

### **TRANSPORTATION**

The proposed site fronts existing Shreve Mill Road immediately south and west of the Dulles Greenway and adjacent to the Shreve Mill Road interchange. Shreve Mill Road is currently a two-lane pave-in-place roadway from the Dulles Greenway to Evergreen Road west of the

project site. The Board of Supervisors recently identified and voted for the road's adoption into the VDOT's Rural Rustic Road program and therefore is not intended to be widened or improved except in a manner that maintains its rural characteristics. The applicant is proposing to widen the existing pavement section of Shreve Mill Road only along the property's frontage from approximately 18 feet to 24 feet of pavement with the project to allow for safe conveyance of two-way traffic along the property's frontage.

A traffic impact study produced by Clark Nexsen identified only minor roadway improvements necessary to the existing Shreve Mill Road to accommodate traffic impacts generated from the new facility. The study recommends a tapered right turn-lane for westbound traffic on Shreve Mill Road entering the site. Additional right-of-way in support of the new roadway improvements will be dedicated to VDOT. No other transportation improvements were identified as necessary to support the new training facility.

### **SUMMARY**

The proposed Public Safety Firing Range is consistent with the policies of the County's Comprehensive Plan and merits approval of its Special Exception. To justify this reasoning, we offer the following:

- The County has determined the need to replace the existing outdoor firing range due to its outdated components and inability to support future demand of the Sheriff's Office. This site offers a location in close proximity to the Sheriff's Office Headquarters allowing for increased efficiencies in the department.
- The indoor training and firing range facility will provide an all-season and all-weather program conducive to meeting the demands of the Sheriff's Office.
- The proposed site will offer a centralized location to law enforcement officers throughout the County.
- The indoor range is currently identified to be co-located with a future fire and rescue station intended to serve the Leesburg South area.
- Safe and convenient access will be provided to the site via the existing Shreve Mill Road and has convenient access to the Dulles Greenway and other major collector roads.
- The proposed development will incorporate the elements of Green Infrastructure with protection of the environmentally sensitive areas, extensive tree save areas, low impact development design standards and best management practices, and sustainable design measures.
- The proposed design will preserve existing wetland designated areas. A previously completed Phase I archeological study has not identified any cultural resources on the site.
- DCR has not identified any natural heritage resources, including endangered animal, plant or insect species that will be adversely impacted by the proposed development.
- The proposed governmental use is compatible with its surrounding land uses. Natural wooded buffers complemented with design elements will allow the new facility to blend into its surroundings and maintain the rural essence of the area.



- The proposed use will comply with zoning standards for AR-1 including maximum building coverage and height.

In summary, the proposed public facility is consistent with the County's Comprehensive Plan and will meet the critical service need for the Sheriff's Office and the greater Loudoun community. Additionally, approval of the application will have no deleterious impact to the health, safety, and welfare of the public. We respectfully request your favorable consideration of both applications.



NOT FOR  
CONSTRUCTIONCONCEPT  
SITE PLAN

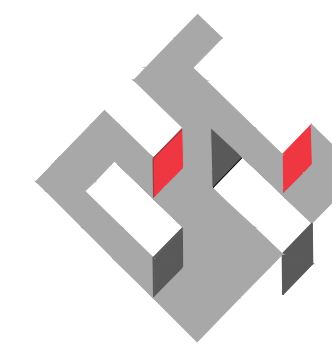
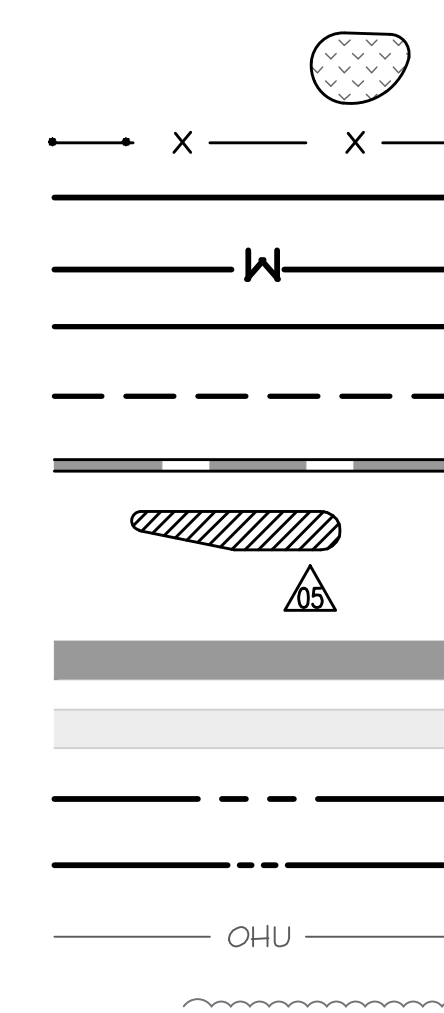
8/18/2014

GRAPHIC SCALE(S)

LOUDOUN COUNTY PUBLIC SAFETY FIRING RANGE

SHREVE MILL ROAD (RTE 653)  
LEESBURG, VIRGINIACN NO:  
DATE: BB  
DESIGN: BB  
DRAWN: BB  
REVIEW: DQ  
REVISIONS  
No. Date Description BLDG By  
1 6/02/15 UPDATED LOCATION KMWCONCEPT  
SITE PLAN

C1.0

christopher consultants  
engineering · surveying · land planning

## LEGEND

PROPOSED LOW IMPACT DEVELOPMENT FACILITY (LID, SWM/BMP)  
PROPOSED FENCE WITH GATE  
PROPOSED FIRE LINE  
PROPOSED DOMESTIC WATER LINE  
PROPOSED SEWER LATERAL  
PROPOSED SEPTIC DRAINFIELD  
PROPOSED STORM SEWER  
PROPOSED PAVEMENT STRIPING  
PROPOSED PARKING COUNT  
PROPOSED SHREVE MILL ROAD WIDENING  
PROPOSED HEAVY DUTY PAVING  
EXISTING PROPERTY BOUNDARY  
FUTURE SHREVE MILL ROAD RIGHT-OF-WAY  
EXISTING OVERHEAD UTILITY  
EXISTING TREELINE

NOTES  
HORIZONTAL DATUM SHOWN HEREON IS VIRGINIA COORDINATE  
SYSTEM NAD '83. VERTICAL DATUM SHOWN HEREON IS NAVD '88.  
THIS CONCEPT LAYOUT AND THE PROPOSED SHREVE MILL ROAD  
DEDICATION ARE SUBJECT TO CHANGE BASED ON COUNTY  
APPROVAL, SITE SURVEYING AND PRELIMINARY ENGINEERING.

SITE TABULATIONS  
SUBJECT PROPERTY

MCPI #235-17-7001

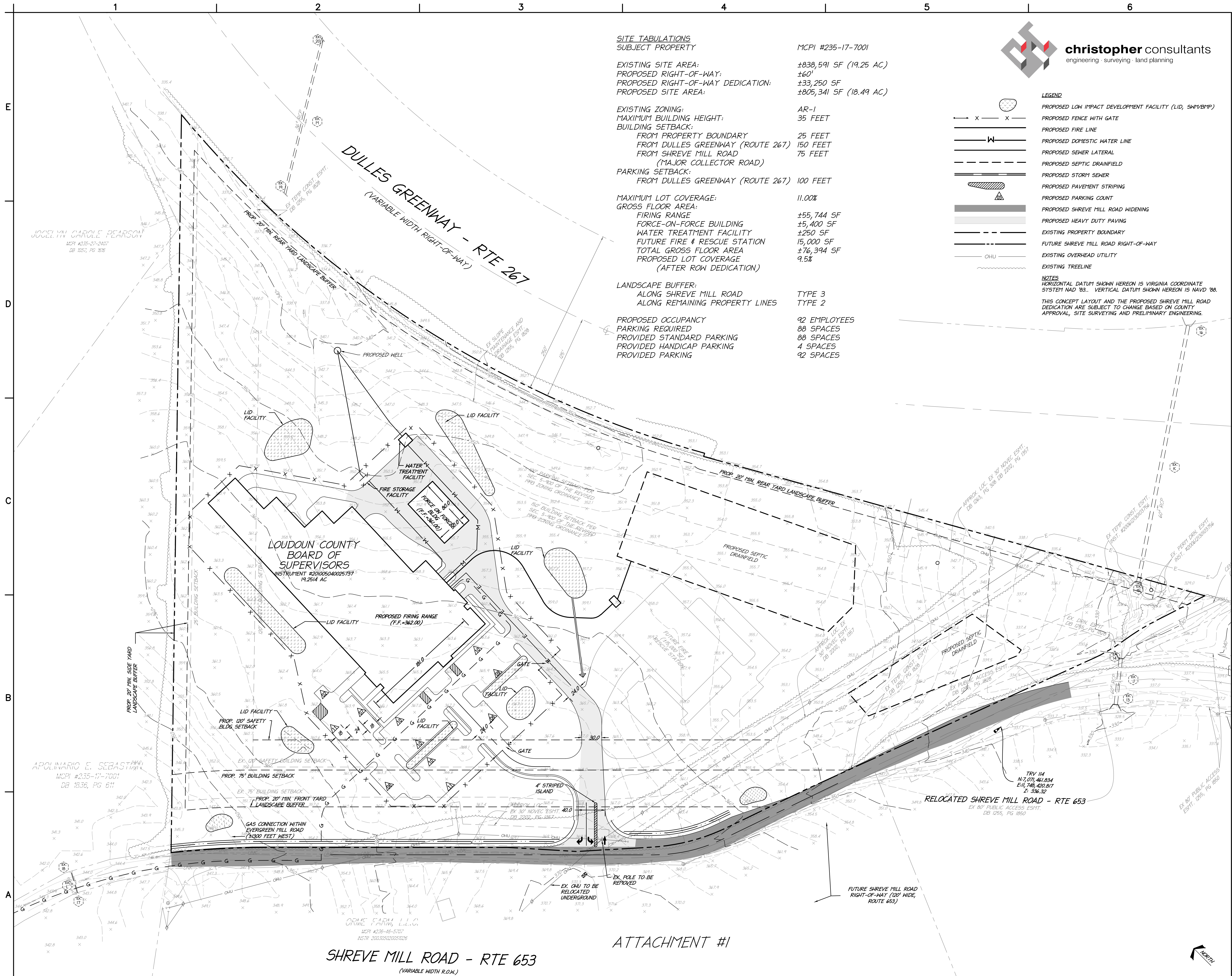
EXISTING SITE AREA: ±838,591 SF (19.25 AC)  
PROPOSED RIGHT-OF-WAY: ±60'  
PROPOSED RIGHT-OF-WAY DEDICATION: ±33,250 SF  
PROPOSED SITE AREA: ±805,341 SF (18.49 AC)

EXISTING ZONING: AR-1  
MAXIMUM BUILDING HEIGHT: 35 FEET  
BUILDING SETBACK:  
FROM PROPERTY BOUNDARY 25 FEET  
FROM DULLES GREENWAY (ROUTE 267) 150 FEET  
FROM SHREVE MILL ROAD 75 FEET  
(MAJOR COLLECTOR ROAD)  
PARKING SETBACK:  
FROM DULLES GREENWAY (ROUTE 267) 100 FEET

MAXIMUM LOT COVERAGE: 11.00%  
GROSS FLOOR AREA:  
FIRING RANGE ±55,744 SF  
FORCE-ON-FORCE BUILDING ±5,400 SF  
WATER TREATMENT FACILITY ±250 SF  
FUTURE FIRE & RESCUE STATION 15,000 SF  
TOTAL GROSS FLOOR AREA ±76,394 SF  
PROPOSED LOT COVERAGE 9.5%  
(AFTER ROW DEDICATION)

LANDSCAPE BUFFER:  
ALONG SHREVE MILL ROAD TYPE 3  
ALONG REMAINING PROPERTY LINES TYPE 2

PROPOSED OCCUPANCY 92 EMPLOYEES  
PARKING REQUIRED 88 SPACES  
PROVIDED STANDARD PARKING 88 SPACES  
PROVIDED HANDICAP PARKING 4 SPACES  
PROVIDED PARKING 92 SPACES



ATTACHMENT #1





(These drawings are for illustrative purposes only and are subject to improvements as the design develops.)



# **LOUDOUN COUNTY PUBLIC SAFETY FIRING RANGE**

Building Concept Design Elevations



ATTACHMENT #2

### ATTACHMENT #3

Clark Nexsen  
Acoustical Analysis  
Proposed Public Safety Firing Range

April 16, 2015  
Summary of Acoustical Analysis Method  
Loudoun County, Virginia

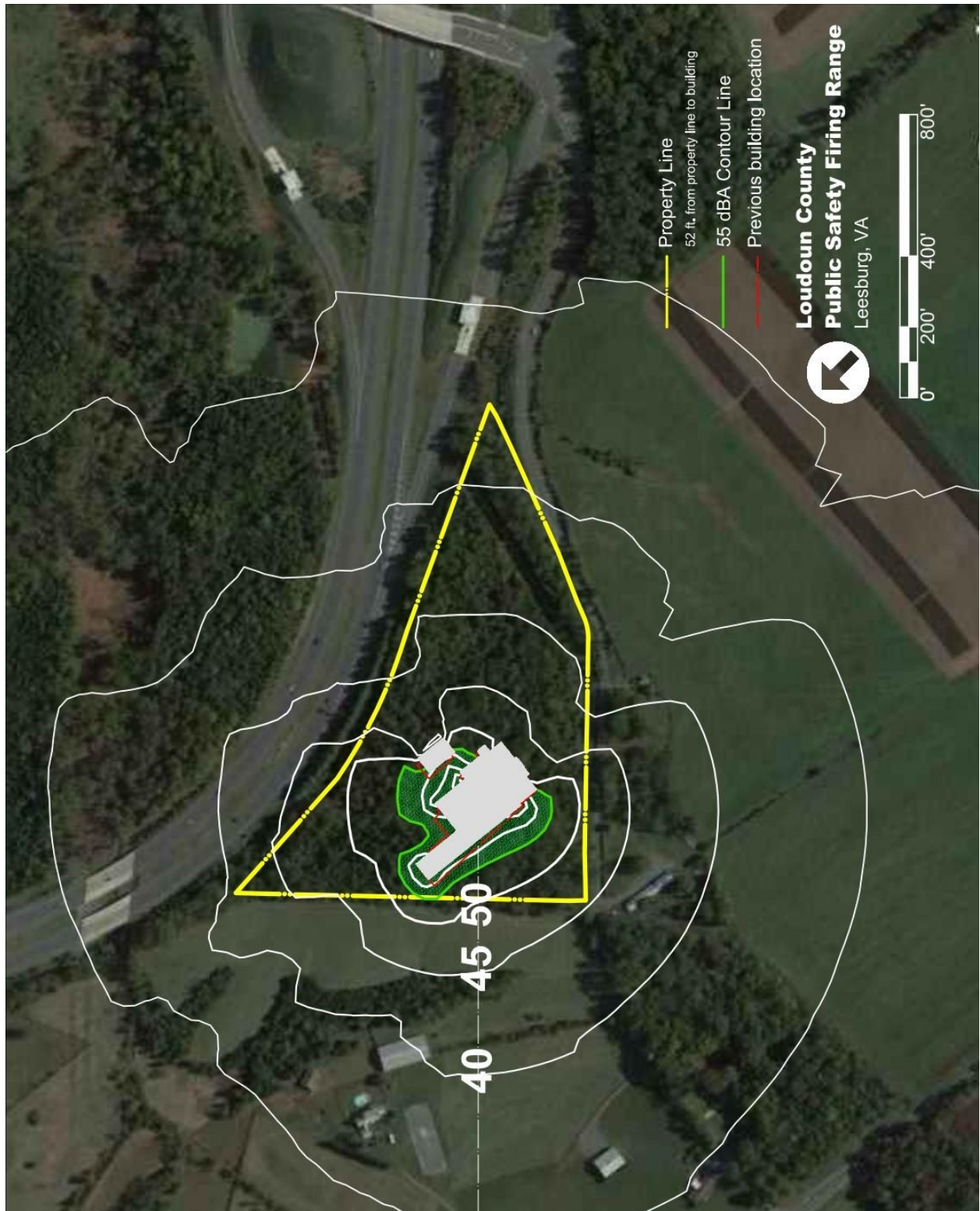


Figure 4. Site plan showing noise contour for Option 4 –Building moved an additional 10 ft. to the east with acoustical upgrades to the doors, louvers and HVAC systems to reduce sound levels propagated from the range to meet night time sound level limits in the noise ordinance